## Technical Specifications

# Full HD IR Dome IP Camera
## FOR EXTERNAL APPLICATION

- Full HD 1080p 30fps

- H.264 and MJPEG compression

- True Day/Night and WDR

- 4x optical zoom lens

- Remote zoom and focus

- Built-in IR illuminator with 30m (98ft) viewing distance

- Embedded VCA Technology Video Analytics

- microSD/SDHC memory card slot

- Power over Ethernet (IEEE 802.3af)

**Onvif S**

### CAMERA

| | |
|---|---|
| **Model** | **IPN3512HD-6311IR**<br>Outdoor, Motorized Focus & Zoom lens |
| **Image Sensor** | SONY EXMOR 1/2.9" 1080p CMOS |
| **Effective Pixels** | 1920 x 1080 |
| **Scanning System** | Progressive scanning |
| **AGC Control** | Auto |
| **Auto IRIS (DC)** | Supported |
| **Minimum Illumination** | Color: 0.5Lux / B/W : 0Lux (IR LED On) |
| **Lens** | 2.8(w) – 12.0mm(t), F1.4(w) – F2.6(t), Optical 4x |
| **Angle of View** | Horizontal: Approx. 100°(Wide) to 35°(Tele)<br>Vertical: Approx.54°(Wide) to 20°(Tele) |
| **Shutter Time** | Automatic: 1/30 ~ 1/10,000<br>Manual: 1/2 ~ 1/5,000 |
| **Day & Night** | True Day & Night (Removable IR-cut filter) |
| **Wide Dynamic Range** | Digital WDR |

### IR ILLUMINATOR

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|---|---|
| **IR LED** | IR LED X 28 (850nm) |
| **IR Working Distance** | Max. 30m (98ft) |
| **SMART IR** | Supported |

### VIDEO

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|---|---|---|
| **Video Compression** | | H.264 Baseline, Main, High profile(MPEG-4 Part 10/ AVC), MJPEG(Motion JPEG) |
| **Video Streaming** | | Dual Stream, Configurable streams in H.264, MJPEG<br>H.264: Controllable frame rate, bandwidth(VBR/CBR)<br>MJPEG: Controllable frame rate, JPEG quality |
| **Resolutions** | **16:9 mode** | 1920 x 1080, 1280 x 720, 1120 x 630, 960 x 540, 800 x 450, 640 x 360, 480 x 270, 320 x 180 |
| | **4:3 mode** | SXGA(1280x960), XGA(1024x768), SVGA(800x600), PAL(720x576), NTSC(720x480), VGA(640x480), QVGA(320x240) |
| **Frame Rate** | | H.264: Max 30fps in all resolutions<br>MJPEG: Max 30fps in all resolutions |

| | |
|---|---|
| **Image Settings** | Configurable brightness, contrast, saturation, sharpness |
| **Image Orientation** | Flip / Mirror / Corridor Mode(-90°, +90°) |
| **Noise Filter** | Supported (0 ~ 3) |
| **Defogging** | Supported |
| **Smart Bitrate Control** | Supported (It works in VBR mode) |
| **Exposure Adjustment** | +1.0, +0.6, +0.3, 0, -0.3, -0.6, -1.0 EV |
| **White Balance** | ATW1 / ATW2 / Push / Manual |
| **Back Light Compensation** | On(possible to designate zone) / Off |
| **Flicker Control** | Normal, 50Hz, 60Hz |
| **DSS (Sens-up)** | 2X ~ 16X |
| **Video Stabilization** | Supported |
| **Burnt-in Text** | Time stamp and text caption overlay |
| **Privacy Mask** | 4 configurable regions |

### AUDIO

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|---|---|
| **Audio Streaming** | - |
| **Audio Compression** | - |
| **Audio input / output** | - |

### NETWORK

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|---|---|
| **Ethernet Standard** | 10 / 100 Base-T |
| **IP** | IPv4, IPv6 |
| **Protocol** | QoS Layer 3 DiffServ, TCP/IP, UDP/IP, HTTP, HTTPS, FTP, RTSP, RTCP, RTP/UDP, RTP/TCP, mDNS, UPnP™, SMTP, DHCP, DNS, DynDNS, NTP, SNMPv1/v2c/v3(MIB-II), IGMP, ICMP, SSLv2/v3, TLSv1, SRTP, RTMP |
| **Security** | HTTPS(SSL), IP Filtering, Multi-level access with password protection |
| **Users** | Live viewing for up to 10 clients |

*Class4 or higher SD cards are recommended for HD recordings.
**The internal heater will operate to boot the device, which approximately takes 1~3 minutes.

## Technical Specifications

### INTEGRATION

| | |
|---|---|
| Application Programming Interface | Software Development Kit(SDK) available |
| ONVIF Compliance | Profile S, Profile G |
| Event Sources | Sensor(DI); Alarm(DO); Video Motion Detection; Face Detection; Tamper Detection; Video Content Analytics(VCA); Network Loss/Detect; Network Setting Change; Time(Recurrence/Schedule); Storage Error |
| Event Actions | File upload: E-mail, FTP<br>Notification: E-mail, FTP, HTTP, TCP<br>Trigger-Alarm(DO)<br>Recording<br>Event Log Saving |
| Event Metadata Streaming (RTSP/RTP) | Video Motion Detection(MD); Video Content Analytics(VCA) |

### GENERAL

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|---|---|
| Material | Aluminum, Anti-vandal bubble (PC); Ivory |
| External I/O Terminals | 1x Alarm In, 1x Alarm Out |
| Language on webpage | Korean, English, Chinese |
| Power Source / Consumption | DC 12V, PoE / 10W@ DC 12V (Heater On, IR-LED On) |
| Operating Temperature | Humidity up to 85% RH (non-condensing) [DC12V / PoE] -40°C ~ 50°C (-40°F ~ 122°F); Built-in heater |
| Lowest Temperature for device's start-up** | [DC12V / PoE] ] 0°C ~ 50°C (32°F ~ 122°F) |
| Approvals | FCC, CE, KC, IP66 |
| IK Rating | IK10 |
| Weight | 1.2kg (2.7lb) |
| Dimensions (W x H) | Ø155mm x 129mm (Ø6.1" x 5.1")<br>Bubble: Ø100mm (Ø3.9") |

### EDGE STORAGE

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|---|---|
| Storage | 1x mircoSD/microSDHC memory card slot (SD/SDHC up to 32GB, card not included)* |
| Continuous Recording | Instant recording; Search & Download |
| Event Recording | Search of Event Logs; Playback; Download |

### VIDEO ANALYTICS

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|---|---|
| Analytics Engine | VCA Technology's advanced tracking algorithm with rich library of detection behaviors |
| Detection Zones and Rules | 40 zones (Multi-segment Polygons and Lines) in total<br>60 rules in total |
| Tamper Detection | Supported |
| Auto Tracking | - |
| VCA Preset | - |

### VIDEO ANALYTICS (Optional Features)

| | |
|---|---|
| Detection Behavior | Enter, Exit, Appear, Disappear, Stop, Direction, Dwell filter; Tailgating; Color Filter |
| Logical Rules | Extends standard rules to allow various combinations of the inputs |
| 3D Behavior | Perspective Corrected Size and Speed Filters |
| Object Classification | Configured Max./Min. object sizes and Max./Min. speeds |
| People Tracking | Tracks individuals separately among overlapped multiple people |
| Counting Line | High accuracy people and vehicle counting |
| Counting | 20 counters in total |
| Counter Report | Generates counter reports based on the counter database |
| Heatmap Report | Shows relative crowd density of the 24 hour period (criterion: midnight) |
| Meta Data | Plain XML Format |

## Dimensions

(Unit: mm)